



## FOREST SERVICE MANUAL NATIONAL HEADQUARTERS (WO) WASHINGTON, DC

### FSM 2000 – NATIONAL FOREST RESOURCE MANAGEMENT

#### CHAPTER 2020 – ECOSYSTEM RESTORATION

**Amendment No.:** 2000-2016-1

**Effective Date:** May 27, 2016

**Duration:** This amendment is effective until superseded or removed.

**Approved:** GREGORY SMITH  
Acting Associate Deputy Chief

**Date Approved:** 09/04/2014

**Posting Instructions:** Amendments are numbered consecutively by title and calendar year. Post by document; remove the entire document and replace it with this amendment. Retain this transmittal as the first page(s) of this document. The last amendment to this title was 2000-2013-1 to FSM 2060.

<b>New Document</b>	2020	9 Pages
<b>Superseded Document(s) by Issuance Number and Effective Date</b>	id_2020-2015-1, 10/15/2015	12 Pages

#### **Digest:**

2020 - Incorporates id\_2020-2015-1 in its entirety.

2020.5 - Revises terminology in several definitions: (1) for consistency with definitions used by the Intergovernmental Panel on Climate Change (IPCC) in the IPCC Fourth Assessment Report, Climate Change 2007, Synthesis Report, Annex II Glossary; and (2) in response to public comment received on the proposed planning rule Title 36, Code of Federal Regulations, Part 219—Planning, Subpart A--National Forest System Land Management Planning (36 CFR part 219, subpart A).

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FSM 2020 provides policy for reestablishing and retaining ecological resilience of National Forest System lands and resources to achieve sustainable multiple use management and provide a broad range of ecosystem services. Resilient ecosystems have greater capacity to survive disturbances and large-scale threats, especially under changing and uncertain future environmental conditions, such as those driven by climate change and human uses. The directive reaches across all program areas and activities applicable to management of National Forest System lands and resources so as to ensure integration and coordination at all levels and organizational units. It does not directly affect land management plans or the occupancy and use of National Forest System lands, leaving to responsible officials the discretion to decide when and how to authorize restoration projects and activities. When applying or implementing this policy, the Forest Service must comply with applicable laws and regulations, including the National Forest Management Act (NFMA), Multiple-Use Sustained-Yield Act (MUSYA), and the principal statutes in section FSM 2020.11.

### **2020.1 – Authority**

The authority for sustainably managing the National Forest System derives from laws enacted by Congress that set out the purpose for which it has been established and is to be administered. These laws are cited throughout the Forest Service Manual and Handbooks. FSM 1010 lists the most significant laws and provides guidance on where to obtain copies of them.

The history of federal policies, treaties, statutes, court decisions, and Presidential direction regarding Indian Tribes and tribal rights and interests is extensive. FSM 1563.01a through FSM 1563.01i set out the legal authorities relevant to Forest Service relationships with Tribes.

The President issued direction through several Executive Orders relevant to protection of resources or restoration of ecosystem processes and functions (FSM 2020.12). Also, numerous regulations governing the sustainable management and restoration of National Forest System lands are found in the Code of Federal Regulations under Title 36, Chapter II, parts 200-299.

### **2020.11 – Laws**

The principal statutes governing the reestablishing and retaining ecological resilience of National Forest System lands and resources to achieve sustainable multiple use management and provide a broad range of ecosystem services, include but are not limited to, the following statutes, which are listed in alphabetical order. Except where specifically stated, these statutes apply to all National Forest System lands and resources.

1. Forest and Rangeland Renewable Resources Planning Act (RPA) of 1974, as amended by National Forest Management Act (NFMA) of 1976 (16 U.S.C. 1600-1614, 472a). This Act states that the development and administration of the renewable resources of the National Forest System are to be in full accord with the concepts for multiple use and sustained yield of products and services as set forth in the Multiple-Use Sustained-Yield

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Act of 1960. The Act establishes the policy of the Congress that all forested lands in the National Forest System be maintained in appropriate forest cover with species of trees, degree of stocking, rate of growth, and stand conditions designed to secure the maximum benefits of multiple use sustained yield management in accordance with land management plans. It sets forth the requirements for land and resource management plans for units of the National Forest System, including requiring guidelines to provide for the diversity of plant and animal communities based on the suitability and capability of the specific land area and within multiple use objectives.

2. Healthy Forests Restoration Act (HFRA) of 2003 (16 U.S.C. 6501-6591). This Act provides processes for developing and implementing hazardous fuel reduction projects on certain types of "at-risk" National Forest System and Bureau of Land Management (BLM) lands, and also provides other authorities and direction to help reduce hazardous fuels and protect, restore, and enhance healthy forest and rangeland ecosystems.

3. Multiple-Use Sustained-Yield Act of 1960 (16 U.S.C. 528-531). This Act states that the National Forests are to be administered for outdoor recreation, range, timber, watershed, and wildlife and fish purposes, and adds that the establishment and maintenance of wilderness areas are consistent with this Act. This Act directs the Secretary to manage renewable surface resources of the National Forests for multiple use and sustained yield of the several products and services obtained therefrom. Multiple use means the management of all the various renewable surface resources of the National Forests in the combination that will best meet the needs of the American people; providing for periodic adjustments in use to conform to changing needs and conditions; and harmonious and coordinated management of the resources without impairment of the productivity of the land. Sustained yield of the several products and services means achieving and maintaining in perpetuity a high-level annual or regular periodic output of renewable resources without impairment of the productivity of the land.

4. Organic Administration Act (at 16 U.S.C. 475, 551). This Act states the purpose of the National Forests, and directs their control and administration to be in accord with such purpose, that is, "[n]o national forest shall be established, except to improve and protect the forest within the boundaries, or for the purpose of securing favorable conditions of water flows, and to furnish a continuous supply of timber for the use and necessities of citizens of the United States." Authorizes the Secretary of Agriculture to "make such rules and regulations . . . to preserve the [national] forests from destruction."

Other statutes, regulations, and Executive Orders related to the policies in the restoration policy are referenced in FSM 2020.6.

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## **2020.2 – Objective**

Ecosystems ecologically or functionally restored, so that over the long term they are resilient and can be managed for multiple use and provide ecosystem services, including but not limited to carbon storage and sequestration.

## **2020.3 – Policy**

1. The Forest Service will emphasize ecosystem restoration across the National Forest System and within its multiple use mandate.
2. The Forest Service land and resource management plans, project plans, and other Forest Service activities may include goals or objectives for restoration. The goals or objectives for ecosystem restoration must be consistent to all applicable laws and regulations. In development of restoration goals or objectives, the Forest Service should consider:
  - a. factors such as the following:
    - (1) public values and desires;
    - (2) the natural range of variation (NRV);
    - (3) ecological integrity;
    - (4) current and likely future ecological capabilities;
    - (5) a range of climate and other environmental change projections;
    - (6) the best available scientific information; and,
    - (7) detrimental human uses.
  - b. technical and economic feasibility to achieve desired future conditions.
  - c. ecological, social, and economic sustainability.
  - d. the recovery, maintenance, and enhancement of carbon stocks.
  - e. opportunities to incorporate restoration objectives into resource management projects to achieve complementary or synergistic results.
  - f. the concept that an ecological system is dynamic and follows an ecological trajectory

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- g. the social, economic and ecological influences of restoration activities at multiple scales.
3. The Forest Service may reestablish, maintain, or modify the composition, structure, function, and connectivity of aquatic and terrestrial ecosystems in order to sustain their resilience and adaptive capacity.
  4. Activities with localized, short-term adverse effects may be acceptable in order to achieve long-term restoration objectives.
  5. The definitions for following terms in this policy are identical to the definitions for the same terms in the National Forest System, Land Management Planning Directive: adaptation, adaptive capacity, adaptive management, disturbance, disturbance regime, ecological integrity, ecosystem, ecosystem services, landscape, natural range of variation (NRV), resilience, restoration–ecological, restoration–functional, stressors, and sustainability. (FSH 1909.12, zero code, section 05).
  6. When ecosystems have been altered to such an extent that reestablishing key ecosystem characteristics within the NRV may not be ecologically or economically possible, the restoration focus should be to create functioning ecosystems.
  7. Resource managers should consider ecological conditions across ownerships and jurisdictions to develop and achieve landscape restoration objectives by engaging the public, State and local governments, and consultation with Indian Tribes.
  8. Not all natural resource management activities are required to include restoration, and not all National Forest System lands require restoration.

## **2020.4 – Responsibility**

The responsible officials to carry out the Ecosystem Restoration Policy are the Agency employees who have the delegated authority to approve land and resource management plans, project plans, or other Forest Service activities.

## **2020.5 – Definitions**

The definitions at the Land Management Planning Handbook, FSH 1909.12, zero code chapter, section 05 at [http://www.fs.fed.us/im/directives/fsh/1909.12/wo\\_1909.12\\_zero\\_code.docx](http://www.fs.fed.us/im/directives/fsh/1909.12/wo_1909.12_zero_code.docx) apply for the following terms in this policy: adaptation, adaptive capacity, adaptive management, carbon pool, carbon stocks, disturbance, disturbance regime, ecological integrity, ecosystem, ecosystem services, landscape, natural range of variation (NRV), resilience, restoration–ecological, restoration–functional, stressors, and sustainability.

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## **2020.6 – References**

This section displays references to statutes, regulations, and Executive Orders related to the policies in FSM 2020.

### **2020.61 – References to Statutes**

1. Text of the Agricultural Act of 2014 (16 U.S.C. 6591c and 16 U.S.C. 2113a) Title VIII, Sections 8205 & 8206 is available at: <https://www.gpo.gov/fdsys/pkg/USCODE-2014-title16/pdf/USCODE-2014-title16-chap84-subchapVI-sec6591c.pdf> and <https://www.gpo.gov/fdsys/pkg/USCODE-2014-title16/pdf/USCODE-2014-title16-chap41-sec2113a.pdf>.
2. Text of the Anderson-Mansfield Reforestation and Revegetation Joint Resolution Act of 1949 (at 16 U.S.C. 581j and 581j (note)) is available at: <https://www.gpo.gov/fdsys/pkg/USCODE-2011-title16/pdf/USCODE-2011-title16-chap3-subchapII-sec581j.pdf>.
3. Text about visibility protection for Federal class I areas (43 U.S.C. 7491) and text about Control of air pollution from Federal facilities under the Clean Air Act (42 U.S.C. 7401, 7418, 7470, 7472, 7474, 7475, 7491, 7506, 7602) is available at: <https://www.gpo.gov/fdsys/pkg/USCODE-2014-title42/pdf/USCODE-2014-title42-chap85-subchapI-partC-subpartii-sec7491.pdf> and <https://www.gpo.gov/fdsys/pkg/USCODE-2014-title42/pdf/USCODE-2014-title42-chap85-subchapI-partA-sec7418.pdf>.
4. Text about Federal facilities water pollution control responsibilities (33 U.S.C. 1323) under the Clean Water Act (33 U.S.C. 1251, 1254, 1323, 1324, 1329, 1342, 1344) is available at: <https://www.gpo.gov/fdsys/pkg/USCODE-2014-title33/pdf/USCODE-2014-title33-chap26-subchapIII-sec1323.pdf>.
5. Text of the Endangered Species Act of 1973 (16 U.S.C. 1531-1544, as amended) is available at: <https://www.gpo.gov/fdsys/pkg/USCODE-2011-title16/pdf/USCODE-2011-title16-chap35.pdf>.
6. Text of the Forest and Rangeland Renewable Resources Planning Act (RPA) of 1974, as amended by National Forest Management Act (NFMA) of 1976 (16 U.S.C. 1600-1614, 472a) is available at: <https://www.gpo.gov/fdsys/pkg/USCODE-2010-title16/html/USCODE-2010-title16-chap5C.htm>.
7. Text of the Granger-Thye Act (16 U.S.C. at 580g-h) is available at: <https://www.gpo.gov/fdsys/pkg/USCODE-2011-title16/pdf/USCODE-2011-title16-chap3-subchapI-sec580g.pdf> and [https://www.gpo.gov/fdsys/pkg/USCODE-2011-title16-chap3-subchapI-sec580h.pdf](https://www.gpo.gov/fdsys/pkg/USCODE-2011-title16/pdf/USCODE-2011-title16-chap3-subchapI-sec580h.pdf).

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8. Text of the Healthy Forests Restoration Act (HFRA) of 2003 (16 U.S.C. 6501-6591) is available at: <https://www.gpo.gov/fdsys/pkg/USCODE-2011-title16/pdf/USCODE-2011-title16-chap84.pdf>.
9. Text of the Knutson-Vandenberg Act (16 U.S.C. at 576b) is available at: <https://www.gpo.gov/fdsys/pkg/USCODE-2011-title16/pdf/USCODE-2011-title16-chap3-subchapI-sec576b.pdf>.
10. Text of the Magnuson-Stevens Fishery Conservation and Management Act of 2006 (16 U.S.C. 1855, as amended) is available at: <https://www.gpo.gov/fdsys/pkg/USCODE-2011-title16/pdf/USCODE-2011-title16-chap38-subchapIV-sec1855.pdf>.
11. Text of the Multiple-Use Sustained-Yield Act of 1960 (16 U.S.C. 528-531) is available at: <http://www.fs.fed.us/emc/nfma/includes/musya60.pdf>.
12. Text of the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321 et seq.) is available at: <https://www.gpo.gov/fdsys/pkg/USCODE-2011-title42/pdf/USCODE-2011-title42-chap55.pdf>.
13. Text of the North American Wetland Conservation Act (16 U.S.C. 4401 (note), 4401-4413, 16 U.S.C. 669b (note)). Section 9 (U.S.C. 4408) is available at: <https://www.gpo.gov/fdsys/pkg/USCODE-2011-title16/pdf/USCODE-2011-title16-chap64-sec4408.pdf>.
14. Text of the Organic Administration Act (at 16 U.S.C. 475, 551) is available at: <https://www.gpo.gov/fdsys/pkg/USCODE-2011-title16/pdf/USCODE-2011-title16-chap2-subchapI-sec475.pdf> and [https://www.gpo.gov/fdsys/pkg/USCODE-2011-title16-chap3-subchapI-sec551.pdf](https://www.gpo.gov/fdsys/pkg/USCODE-2011-title16/pdf/USCODE-2011-title16-chap3-subchapI-sec551.pdf).
15. Text of the Sikes Act (16 U.S.C. at 670g) is available at: <https://www.gpo.gov/fdsys/pkg/USCODE-2010-title16/html/USCODE-2010-title16-chap5C.htm>.
16. Text of the Tribal Forest Protection Act of 2004 (25 U.S.C. 3115a) is available at: <http://www.fs.fed.us/restoration/documents/stewardship/tfpa/TribalForestProtectionAct2004.pdf>.
17. Text of the Weeks Act, as amended (at 16 U.S.C. 515, 552) is available at: <http://www.fs.fed.us/land/staff/Documents/Weeks%20Law.pdf>.
18. Text of the Wilderness Act of September 3, 1964 (16 U.S.C. 1131-1136) is available at: <http://www.gpo.gov/fdsys/pkg/USCODE-2012-title16/pdf/USCODE-2012-title16-chap23.pdf>.



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19. Selected text of the Wild and Scenic Rivers Act of October 2, 1968 (Public Law 90-572; 16 U.S.C. 1271-1287), as amended, is available at:  
<http://www.rivers.gov/documents/wsr-act.pdf>.

**2020.62 – References to Federal Regulations**

Text of 36 CFR 219 governing land and resource management planning as amended through April 19, 2013 is available at: <http://www.gpo.gov/fdsys/pkg/CFR-2013-title36-vol2/pdf/CFR-2013-title36-vol2-part219.pdf>.

**2020.63 – References to Executive Orders**

1. Text of Executive Order 11514 issued March 5, 1970, as amended by E.O. 11991, issued May 24, 1977. Protection and enhancement of environmental quality (35 FR 4247, March 7, 1970; 42 FR 26967, May 25, 1977) is available at: <http://www.archives.gov/federal-register/codification/executive-order/11514.html>.
2. Text of the *Executive Order 11644* issued February 8, 1972. Use of off-road vehicles on the public lands. (37 FR 2877, February 9, 1972). Amended by E.O. 11989 issued May 24, 1977 and E.O. 12608 issued September 9, 1987 is available at: <http://www.archives.gov/federal-register/codification/executive-order/11644.html>.
3. Text of the *Executive Order 11988* issued May 24, 1977. Floodplain management (42 FR 26951 (May 25, 1977)) is available at: <http://www.archives.gov/federal-register/codification/executive-order/11988.html>.
4. Text of the Executive Order 11990 issued May 24, 1977. Protection of wetlands. (42 FR 26961, May 25, 1977) is available at: <http://www.archives.gov/federal-register/codification/executive-order/11990.html>.
5. Text of the *Executive Order 13112* issued February 3, 1999. Invasive Species. (64 FR 6183 (February 8, 1999)) is available at: <https://www.gpo.gov/fdsys/pkg/FR-1999-02-08/pdf/99-3184.pdf>.
6. Text of the *Executive Order 13653* issued November 1, 2013. Preparing the United States for the Impacts of Climate Change. (78 FR 66819 (November 6, 2013)) is available at: <https://www.gpo.gov/fdsys/pkg/FR-2013-11-06/pdf/2013-26785.pdf>.